

## SOME NOTES ON THE CONFUSION BETWEEN OXALIS RECLINATA JACQ. AND OXALIS GRACILIS JACQ., WITH DESCRIPTIONS OF NEW VARIETIES OF THESE SPECIES.

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(With Plates XII—XV.)

OXALIS RECLINATA Jacq. *Oxalis reclinata* Jacq., "Oxalis" 70, tab. 34 (Pl. XII (i)), a tall caulescent branching species, which Sonder, and later R. Knuth, placed as a variety of *O. gracilis* Jacq., "Oxalis" 69, tab. 33 (Pl. XIII (i)), is in reality quite a different species. It is identical with a plant collected by Zeyher (*Zey.* 207) near Bitterfontein in the Van Rhyu's Dorp Division and described by Turczaninow in Bull. Soc. Nat. Mosc. XXXI, I (1858) 432 as *O. gymnoclada* Turcz. and later by Sonder in Flora Capensis I. 327 as *O. ramigera* Sond. Both these authors, perhaps with some excuse, failed to recognise and associate it with Jacquin's *O. reclinata*.

This species differs from *O. gracilis* in having a green, minutely crispate-hirsute stem and branches (not glabrous, smooth, brown and polished), much broader and hirsute leaflets and in the capsule, which is not exerted from the calyx at maturity. The bulbs in both species are very similar, though in *O. reclinata* they are usually rather more oval and less rotund than in *O. gracilis*.

A few years ago I found this species in two places near Nieuwerust, a few miles south of Bitterfontein. The plants were mostly erect and though the leaflets were rather narrower, it was obviously the same as *Zey.* 207. In the majority of specimens the flowers were salmon-pink (i.e. typical), but a few were pale violaceous, the plant being otherwise identical. Sonder has given the colour as pale rose red, but this was probably guessed from the dried specimens.<sup>1</sup> A few plants growing in shade were weak and somewhat procumbent.

It was not until the following year that their real identity was apparent. Two bulbs grown in pots in the Cape Peninsula, that is in less dry conditions than in their natural habitat, produced long weak

(<sup>1</sup>) The specimens in Sonder's herbarium are now colourless.

prostrate unbranched stems and were so similar to Jacquin's figure of *O. reclinata* that they might almost have served for the model for his illustration. Jacquin's plant, grown in Vienna, could well be expected to take this form, and we have an excellent example of the difficulty often experienced in correlating wild South African plants with the same species grown under unnatural conditions in Europe.

In a subsequent season, about 16 miles to the west of Bitterfontein, while attempting to follow a part of Zeyher's route, I found, as I thought at the time, more specimens of this plant, but on examining them later they were all found to have 5-foliolate leaves instead of trifoliolate (see *O. reclinata* Jacq., var. *quinata* Salter). Although in the wild state they were sturdy and erect, plants grown from bulbs of this form are now flourishing in the National Botanic Gardens at Kirstenbosch, and these have also assumed the reclinate habit of Jacquin's plant.

This and the typical form of *O. reclinata* seem to be confined to the Bitterfontein region. Two other well-marked varieties are mentioned hereinafter.

The following is a citation of the synonymy and specimens of *O. reclinata*, together with descriptions of the varieties.

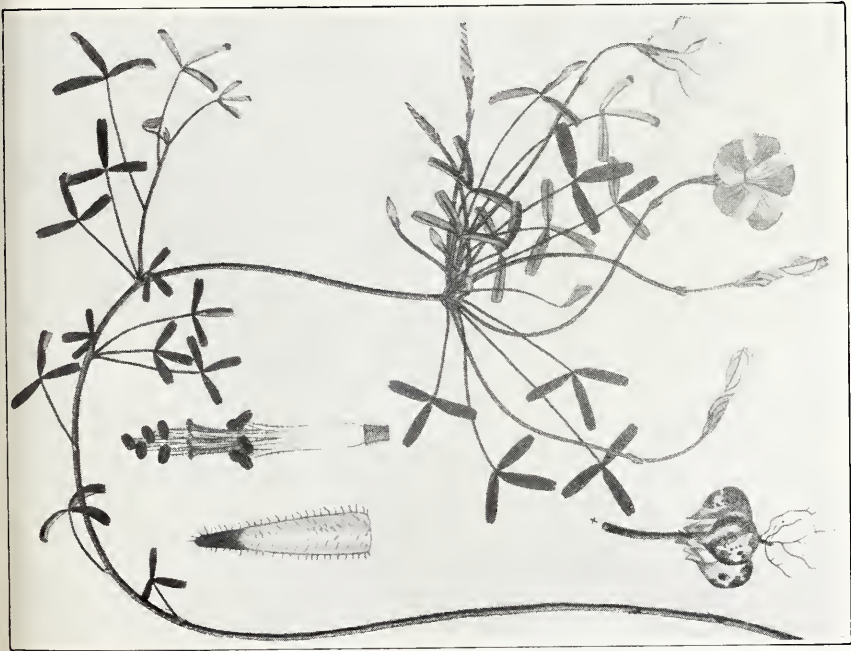
***O. reclinata*** Jacq. (*O. gymnoclada* Turcz.—*O. ramigera* Sond.—*O. gracilis* Jacq., var. *reclinata* Sond.). Stem green, crispate-hirsute. Leaves trifoliolate. Corolla 2—3 cm. long. Ovary chambers 2-ovuled. Capsule not exerted.

*Hab.* Cape Province: Van Rhyn's Dorp Div., Bitterfontein district, Zey. 207 !, in Herb. Sonder; Salter 5340, 5345, salmon-pink; 5341, pale lilac. Fl. May—June. (Pl. XII (ii)).

Var.  $\beta$  ***micromera*** (Sond.) Salter, comb. nov. *O. minutifolia* Turcz.—*O. ramigera* Sond., var. *micromera* Sond.—*O. gymnoclada* Turcz., var. *micromera* (Sond.) R. Knuth. Plant smaller in all parts. Leaves trifoliolate. Corolla pale lilac, up to 1.5 cm. long, with narrower petals, the claw as long as the lamina. Ovary chambers 3-ovuled.

*Hab.* Cape Province: Van Rhyn's Dorp Div., Bitterfontein district, Zey. 206 ! (type in Herb. Sond.), 204, Salter 926, 926A, 1579, 3392, 5498; near Klaver, Salter 1374. Namaqualand: west of Garies, Salter 6649, 6661, Caporn (Bol. Herb. 15110). Fl. June—July.

This variety is somewhat intermediate between the typical form and var.  $\beta$ . It is much commoner and more widely spread than the typical form, being particularly plentiful about Bitterfontein. It is usually found in open ground and although sturdy and erect, many of the plants are stunted and sometimes only a few inches high. In cultivation in the Cape Peninsula it has also assumed a procumbent habit.



(i) *O. redinata* Jacq. (from Jacquin's *Oxalis*, tab. 34), grown in Vienna.



(ii) Wild specimens (Salter 5345),  
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PLATE XIII.

- (i) *O. gracilis* Jacq. (from Jacquin's *Oxalis*, tab. 33), grown in Vienna.  
 (ii) Wild specimens (Salter 674).

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Var.  $\gamma$  **quinata** Salter. *Foliola* 5, lineari-cuneata. *Corolla* salmonea, tubo luteo brevior: petalorum laminae latiores, latissime obovatae vel suborbiculares, unguibus 2-plo longioribus.

*Hab.* Cape Province: Van Rhyn's Dorp Div., 16 miles west of Bitterfontein, Salter 6646 (type in Bolus Herbarium).

Similar in habit and appearance to the typical form, but with 5-foliolate leaves, a shorter corolla tube and much broader petals. (Pl. XIV (i)).

Var.  $\delta$  **gracillima** Salter. *Planta* minor, tenuior, molliter breviterque pubescens. *Foliola* 3, linearia vel anguste linearia. *Corolla* 1.5—2.4 cm. longa, pallide rosea, tubo subcylindrico luteo: petala anguste obovata, unguibus aequantia. *Ovarii* loculi 1—2-ovulati.

*Hab.* Namaqualand: Kamieskroon, Salter 801 (type in Bolus Herbarium); between Kamieskroon and Garies, Salter 4571, 4574, Thorne (S.A. Mus. 48803), Markotter 850. Fl. June.

More slender and with a shorter softer pubescence than the typical form. Leaflets 3, linear. *Corolla* 1.5—2.4 cm. long, pale rose, with an almost cylindrical tube: petals narrow-obovate as long as the claw. Ovary chambers 1—2-ovuled. Dwarfed specimens are very similar in appearance to *O. exserta* Salter, but that species never grows into a tall branching plant and the leaflets are clothed with a harsher indument on both faces. (Pl. XIV (ii)).

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*O. GRACILIS* Jacq. The main characters in which this species differs from *O. reclinata* have been given above. Jacquin's figure ("Oxalis" t. 33) and also that of *O. miniata* Jacq. ("Oxalis" t. 35) show weak-stemmed unbranched plants with much broader leaflets than those of the wild specimens, but this must always be expected in cultivated plants.<sup>2</sup> *O. miniata*, with brick-red flowers, has hitherto been treated as a variety of *O. gracilis*, but this difference is too trivial to accept as

(<sup>2</sup>) It has been found that nearly all the species with narrow leaflets, collected in arid regions, produce much broader leaflets in cultivation under less harsh conditions.

It is perhaps of interest to record that *Oxalis cuneata* Jacq. "Oxalis" 76, t. 40, a species which had, as far as I know, never been rediscovered since Jacquin's time, was found growing in the same vicinity as *O. reclinata* Jacq., var. *quinata*, 15 miles west of Bitterfontein and probably on or near the old route to Namaqualand. The wild plants were erect and had much narrower leaflets than those figured and their identity was not at once recognised. In cultivation, though the plant has retained its erect habit, the leaflets are considerably broader.

varietal. Nor do I consider the white form to be separable as a variety,<sup>3</sup> although it does not grow in association with the typical form and has a rather different geographical distribution. Two well-marked varieties, however, do occur and are described hereinafter.

*O. teretifolia* Sond. Flor. Cap. I p. 322, named from wretched starved specimens<sup>4</sup> (*Zey.* 212 ! Herb. Sond.) in which the leaflets are shrivelled and involute, *not terete*, is also inseparable from *O. gracilis*.

The following is a citation of the synonymy and specimens of *O. gracilis*, together with descriptions of two new varieties.

***O. gracilis*** Jacq., "Oxalis" 69, tab. 33. (*O. versicolor* L., var. *gracilis* Willd.—*O. miniata* Jacq.—*O. gracilis* Jacq., var. *miniata* (Jacq.) Sond.—*O. teretifolia* Sond.)

A tall species. Stem woody, polished, brown, branching, glabrous except at the base. Leaflets narrow-linear, 1—3 cm. long. Corolla 1·7—2·5 cm. long, salmon-pink, brick-red or white: tube yellow, Ovary cano-pubescent on the upper half, with calli near the apex, the chambers 2—3-ovuled. Capsule moniliform, well exerted from the calyx.

*Hab.* Corolla salmon-pink. Cape Province: Clanwilliam Div., *Zey.* 211, *Schlechter* 8046, *Salter* 674; Van Rhyn's Dorp Div., *Zey.* 212 (*O. teretifolia* Sond.), *Salter* 3335, 3408, 5314, 7253. Corolla white. Clanwilliam Div., *Salter* 7246. Namaqualand, Garies district, *Salter* 2554, 5575, 5599.

Like its variety  $\beta$ , this species is remarkable for its prolific flowering. Plants sometimes produce as many as 20 open flowers at one time. (Pl. XIII (ii)).

Var.  $\beta$  ***purpurea*** Salter. *Planta ramosa*. Corolla minor, 1—1·6 cm. longa, saturate roseo-purpurea, tubo luteo. Ovarium in dimidio superiore pubescens, apicem versus callosum.

*Hab.* Namaqualand: 4—6 miles west of Garies, *Salter* 3406 (*type* in Bolus Herbarium), 6652, *Caporn* (Bol. Herb. 15109).

Plant rather smaller. Corolla 1—1·6 cm. long, deep reddish-purple with a yellow tube, much smaller than in the typical form. This variety is not unlike *O. helicoides* Salter, but differs from that species in having

(<sup>3</sup>) If forms differing in the colour of the flowers only, without any structural difference, were separated in this genus, the number of varieties would become endless.

(<sup>4</sup>) All or nearly all of Zeyher's *Oxalis* specimens are in the same dwarfed and starved condition. He was singularly unfortunate in the seasons in which he collected them, in fact it is known that on his first journey to Namaqualand his expedition suffered much from want of water.



(i) *O. reclinata* Jacq., var. *quinata* Salter. The specimen just above the scale is cultivated. (Salter 6846.)



(ii) *O. reclinata* Jacq., var. *gracillima* Salter. (Salter 801.)  
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(i) *O. gracilis* Jacq., var. *purpurea* Salter. (Salter 3406.)



(ii) *O. gracilis* Jacq., var. *lilacea* Salter. (Salter 3501.)

a more or less straight (not spiral) stem and an exserted capsule. (Pl. XV (i)).

Var.  $\gamma$  **lilacea** Salter. *Caulis* simplex, leviter tortuosa. *Corolla* 1.6—2 cm. longa, pallide lilacea, tubo luteo. *Ovarium* ecallosum, in dimidio superiore glanduloso-pilosum, loculis 3-ovulatis.

*Hab.* Cape Province : Van Rhyn's Dorp Div., west of Nieuwerust, *Salter* 5346. Namaqualand : 10 miles south of Garies, *Salter* 5501 (*type* in Bolus Herbarium), 22 miles south of Garies, *Salter* 6663.

Stem 5—12 cm. long, unbranched, somewhat tortuous. Corolla pale lilac, medium sized, but smaller than in the typical form. (Pl. XV (ii)).

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